SOUTH CAROLINA Energy Office

Energy Briefs

Helping You Live Energy Efficiently!

Indoor Air Quality

Many families suffer from respiratory problems, allergies, and other health problems related to the quality of the air inside their homes. Even if your family does not have medical problems, it is smart to avoid these common indoor air pollutants. Potential threats to your family's health include dust mites, carbon monoxide, volatile organic compounds, mold and mildew, radon and other pollutants.

Control Dust Mites

Many people are allergic to dust mites, microscopic animals that thrive inside our homes. Dust mites can eat just about anything, from flakes of dead skin to your furniture's upholstery. To thrive, dust mites need moisture. Keeping the relative humidity in your home below about 60% is important to controlling dust mites.

Start by preventing moisture from entering your home. Proper site drainage, a plastic ground cover over the soil under the home, and an airtight floor help. Ensure that bath and kitchen exhaust fans and clothes dryers vent moisture to the outside, not into a crawl space or attic.

Eliminating air leaks in the ductwork for central heating and cooling systems can also help maintain proper humidity. If you are installing a new heat pump or air conditioner, be certain to have a local utility or contractor determine the proper size for your home. Many homes in the Southeast have units that are too big which waste money and are less effective at controlling interior humidity. A dehumidifier may also be helpful in removing moisture from inside the home.

Smoke and Carbon Monoxide

All combustion appliances, such as fireplaces, woodstoves, and gas water heaters, should be vented to the outside. Even though they are vented, occasionally smoke and other flue gases can escape into your home. These flue gases can be deadly, especially carbon monoxide which is a colorless, odorless gas. In small concentrations, carbon monoxide can cause flu-like symptoms and at higher levels it can quickly kill. If you have a combustion appliance inside your home, install a smoke detector (a smart safety idea for any home) near the unit. Also consider a carbon monoxide detector; combined smoke and carbon monoxide detectors are available at building supply stores.

Volatile Organic Chemicals

Most homes have hundreds of materials ranging from cleaning solutions to carpet glue that can pose some risk to your health. Exposure to these materials, known as volatile organic chemicals, should be avoided. First, reduce the sources of these pollutants as much as possible. Then, isolate yourself from chemicals by storing them outside the home or sealing the source with a material that reduces emissions. Finally, ventilate with fresh air to dilute the chemical to an acceptable level.

Keep Radon out of Your Home

While there is controversy over the scope of the hazard posed by radon gas, people in radon prone areas, such as upstate South Carolina (see map on next page), should still consider measures to reduce radon infiltration. Radon is an odorless, colorless radioactive gas that is one cause of lung cancer. Minute amounts of radon occur in all soils, but some areas have elevated levels that can pose health concerns.

You can easily test your home for radon. Many local hardware and building supply stores carry simple radon test kits for under $25.

Radon enters a home through cracks, especially in the floor. Sealing these cracks helps block entry of radon, moisture, pesticides used to treat termites and other harmful pollutants. For serious radon problems, mitigation systems are available. Sealing cracks also saves money on your energy bills.

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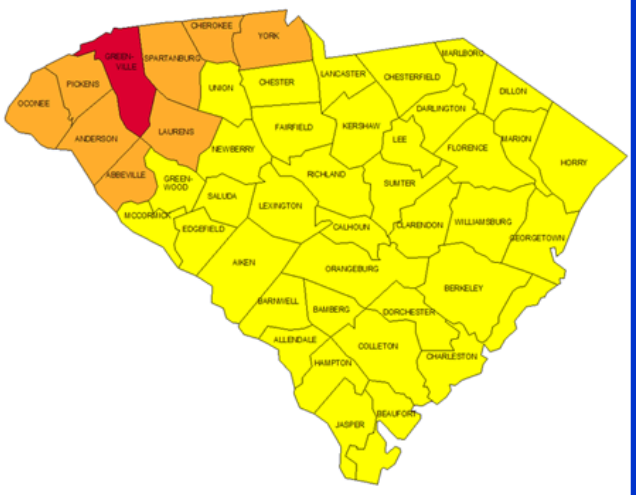
South Carolina Radon Zones



Zone 1 counties have a predicted average indoor radon screening level greater than 4 pCi/L (pico curies per liter). These areas have the highest potential for radon.

Zone 2 counties have a predicted average indoor radon screening level between 2 and 4 pCi/L. These areas have a moderate potential for radon.

Zone 3 counties have a predicted average indoor radon screening level less than 2 pCi/L . These areas have a low potential for radon.

Map and information courtesy of the U.S. Environmental Protection Agency.

Ventilation and Filtration

All homes have some level of pollutants in them. As our homes become more airtight with improved building techniques, ventilation becomes an issue for concern. While most houses in the Southeast are not built tight enough to require outside ventilation, controlled mechanical ventilation is one way to improve air quality. Such systems not only offer the homeowner control over the ventilation but also the opportunity to filter and clean the air.

Testing

It is possible to test your home for any number of contaminants. Some testing can be very expensive and is best left to experts. However, there are affordable tests available for lead, VOC's, various gasses, radon, pesticide and mold spores.

For Information on Indoor Air Quality

Identifying which pollutants may pose a threat to your health and what you can do to reduce your risk is difficult. For information on maintaining the health of the air inside your home, please visit the South Carolina Department of Health and Environmental Control (DHEC) Indoor Air Quality webpage at http://www.scdhec.gov/environment/baq/indoorair.aspx.

Learn other ways to conserve energy and save money:

www.energy.sc.gov

The official website of the South Carolina Energy Office

*Based on information provided by the Southface Energy Institute.
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